

53. (New) The method of claim 51 wherein the LED system comprises a plurality of LEDs having a plurality of colors, a processor that receives inputs and controls the activation signal in response to the received inputs.

54. (New) The method of claim 51 wherein the activation signal includes a pulse-width modulated signal, an intensity of a color of the LED system being responsive to a duty cycle of the pulse-width modulated signal.

55. (New) The method of claim 51 wherein the object includes at least one of an aquarium, an exhibit, a diorama, a display case, a food, a beverage, a coaster, a display sign, or an information board.

56. (New) The method of claim 51 wherein the activation signal is controlled in response to a user input.

57. (New) The method of claim 51 wherein the activation signal is controlled in response to an external condition.

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#### REMARKS

Claims 1-57 constitute the pending claims in the present application. New claims 51-56 are supported by the specification as filed. Applicants respectfully request reconsideration of the Examiner's rejection of the remaining claims in view of the following remarks. Issues raised by the Examiner will be addressed below in the order they appear in the prior Office Action.

1-3. Claims 1-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Phares in view of Ge. Applicants respectfully traverse this rejection.

Phares teaches a controlled lighting system which comprises a plurality of light modules, each including at least two light elements and a control unit. Ge et al. teach a display screen illuminated by cathode tubes. In the Background of the Invention, Ge et al. disclose that "the development of a cost efficient luminescent material for emitting blue light" has been undertaken by researchers. However, contrary to the Examiner's suggestion, Ge et al. do not disclose that this research has been successful. Rather, Ge et al. point out that luminescent materials generally have "luminance efficiencies and product lifetimes... [which] are not acceptable". This is

apparently the reason that Ge et al. do not employ LEDs or other similar light sources in their invention.

The Office Action alleges that one of ordinary skill in the art, reading Phares, would be motivated to use LEDs in place of the light sources described by Phares, despite the disadvantages taught by Ge et al., who did not even employ LEDs in their own device. The Office Action states that Ge et al. point out advantages of LEDs, such as cost efficiency and fewer complexities. On the contrary, however, the section of Ge et al. to which the Examiner refers teaches that 1) *plasma display panels* are characterized by the complexity in fabrication of the discharge cells and use complicated IC driving circuitry - statements which do not reflect any advantages of *LEDs* relative to the light sources taught by Phares - and that 2) LEDs are being investigated as cost efficient materials. The outcome of the investigation of LEDs is not described by Ge et al., and thus it is not apparent from Ge et al. that the investigation has led to the development of improved or even useful LED light sources. In addition, it appears that Ge et al. teach away from the combination, by characterizing LED light sources as having shortcomings and unsatisfactory properties.

Moreover, Applicants respectfully point out that the devices taught by Ge et al. are display devices, similar to televisions, monitors, and other similar apparatus. These devices, which utilize an illuminated screen, are substantially different from the subject matter of claims 1-44, in that it takes much less light to illuminate a screen than to illuminate an external object as contemplated by these claims. Accordingly, one of ordinary skill in the art, particularly after reading of unacceptable luminance efficiencies in the Background of Ge et al., would not be motivated to illuminate an object by modifying the devices taught by Phares to include LEDs.

For the reasons set forth above, Applicants submit that Ge et al. and Phares et al., taken in combination, do not motivate one of ordinary skill in the art to arrive at the subject matter of any of claims 1-45, but rather teach away from making the claimed combinations. Accordingly, Applicants submit that a *prima facie* case of obviousness has not been established. Reconsideration and withdrawal of this rejection is respectfully requested.

4. Claims 45-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fitch in view of Ge et al. Applicants respectfully traverse this rejection.

Fitch teaches a garment bearing a color LCD panel capable of displaying video sequences. Claim 45 is directed to an article of clothing having an LED system controlled by a microprocessor. Fitch does not teach the incorporation of an LED system into a garment, nor that the LCD panel may be replaced by an LED system. Moreover, Fitch does not provide any motivation that would lead one of ordinary skill in the art to make such a substitution, as required by MPEP 2143.01.

Ge et al. do not overcome the limitations of Fitch. As described above, Ge et al. teach a display screen illuminated by cathode tubes. In the Background of the Invention, Ge et al. disclose that "the development of a cost efficient luminescent material for emitting blue light" has been undertaken by researchers. However, contrary to the Examiner's suggestion, Ge et al. do not disclose that this research has been successful. Rather, Ge et al. point out that luminescent materials generally have "luminance efficiencies and product lifetimes... [which] are not acceptable". This is apparently the reason that Ge et al. do not employ LEDs or other similar light sources in their invention.

Thus, Ge et al. teach away from using LED light sources in a display panel, such as the one taught by Fitch et al., by not only failing to suggest its use in their own device, but by pointing out the shortcomings of LED light sources that render them undesirable for use in a display screen. Although the Office Action states that Ge et al. point out advantages of LEDs, such as cost efficiency and fewer complexities, the section of Ge et al. to which the Examiner refers teaches that 1) *plasma display panels* are characterized by the complexity in fabrication of the discharge cells and use complicated IC driving circuitry - saying nothing about any advantages of *LEDs* relative to LCD panel taught by Fitch - and that 2) LEDs are being investigated as cost efficient materials. The outcome of the investigation of LEDs is not described by Ge et al., and thus it is not apparent from Ge et al. that the investigation has led to the development of improved or useful LED light sources.

For the reasons set forth above, Applicants submit that Ge et al. and Fitch et al., taken in combination, do not motivate one of ordinary skill in the art to arrive at the subject matter of any of claims 45-50, but rather teach away from making the claimed combinations by stating that

LEDs have properties undesirable for use in display panels. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

### CONCLUSION

For the foregoing reasons, Applicants respectfully request reconsideration and withdrawal of the pending rejections. Applicants believe that the claims are now in condition for allowance and early notification to this effect is earnestly solicited. Any questions arising from this submission may be directed to the undersigned at (617) 832-1000.

If there are any other fees due in connection with the filing of this Response, please charge the fees to our **Deposit Account No. 06-1448**. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit account.

Respectfully submitted,  
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